

121

# SPECIFICATION

NO DRAWINGS

Inventor: WILLIAM JAMES MANSELL

920.414



Date of filing Complete Specification July 16, 1959.

Application Date Oct. 20, 1958.

No. 33444/58.

Complete Specification Published March 6, 1963.

GT. BRIT.

~~DIV 5~~  
d. 106

Index at acceptance: —Class 2(7), T6(F1:J4:J7).

International Classification: —C08g.

## COMPLETE SPECIFICATION

### Improved Invisible Printing Ink

We, D. B. PUBLISHING COMPANY LIMITED, of Clarendon House, 17—18 New Bond Street, London, W.1, a British Company, do hereby declare the invention, for which we pray that a patent may be granted to us, and the method by which it is to be performed, to be particularly described in and by the following statement:—

This invention is concerned with an invisible printing ink of the general kind which when applied to a suitably absorbent paper or cardboard sheet or like material is only rendered visible when the sheet is wetted.

The invention consists in an invisible printing ink of this kind comprising 10 to 20 per cent by weight of an air drying

silicone composition containing not less than about 50 per cent water repellent silicone, between 2 and 5 per cent by weight of Extra Viscous Varnish and the balance percentage by weight of white spirit. The invention also resides in any paper or cardboard sheet when treated with such an ink.

In a preferred invisible printing ink composition an air drying silicone composition known as M.S. 2202 supplied by the Midland Silicone Company, and of the kind referred to in British Patent Specifications Nos. 703,821 and 723,989 as a textile processing product, is used. This composition has a water-repellent silicone content of 50% by weight, with 25% White Spirit and 25% Xylene and has the following properties:—

35	Viscosity at 25° C., cS	-	-	-	-	15.
	Flash point, °F.	-	-	-	-	75.
	Specific gravity at 25° C.	-	-	-	-	0.89
	Colour	-	-	-	-	Light straw

The preferred ink composition is constituted as follows:—

(1) 20% silicone M.S. 2202, as above, by weight.

(2) 5% extra viscous varnish by weight.

This varnish is composed of:—

60% triple boiled linseed oil

10% copal gum

30% white spirit

and (3) 75% white spirit by weight.

The procedure for the manufacture of a gallon of the composition is as follows:—

(1) 8 ozs by weight of the extra viscous varnish are made up to 40 ozs. by weight with white spirit and is then dissolved in the white spirit with constant stirring. When all the varnish has dissolved the volume should be made up to 80 ozs. by weight.

(2) 32 ozs. by weight of the air drying

silicone composition (M.S. 2202) are measured, the volume made up to 80 ozs. by weight with white spirit and mixed thoroughly.

(3) The two solutions resulting from (1) and (2) are mixed by gentle stirring, transferred to a clean dry container and stored in a cool dry place.

Such an ink may be applied to an absorbent or semi-absorbent single or multi-layered paper or similar compressed or aggregated fibrous material, using any conventional printing machine. When dry the ink is totally invisible but when the paper is thoroughly wetted the ink appears white on the background of the paper. When the paper is dried the printed matter again disappears. Instead of Extra Viscous Varnish 2 stearic acid by weight has been used but does not yield such a satisfactory product.

Price 4s. 6d.]

## WHAT WE CLAIM IS:—

1. An invisible printing ink of the kind referred to comprising 10 to 20 per cent by weight of an air drying silicone composition containing not less than about 50 per cent water repellent silicone, between 2 and 5 per cent by weight of extra viscous varnish, or 2 per cent by weight of stearic acid and the balance percentage by weight of white spirit.
2. An invisible printing ink as set forth in

Claim 1 comprising 20% air drying silicone composition, 5% by weight Extra Viscous Varnish and 75% by weight White Spirit.

3. A method of making an invisible printing ink as set forth in Claim 2 substantially as hereinbefore described.

4. A paper or cardboard sheet or the like when printed with an ink as set forth in Claim 1 or 2.

MARKS & CLERK.

Leamington Spa: Printed for Her Majesty's Stationery Office by the Courier Press.—1963.

Published at The Patent Office, 25, Southampton Buildings, London, W.C.2, from which copies may be obtained.